Job title: Developer, ML and data

Reporting to: CEO

Location: St Phillips, Bristol, UK

Hours of work: Full time, permanent

Closing date: Friday 16th August 2019

Benefits package: Competitive, dependent on experience

Expected start date: Flexible, from September 2019

Company profile

Rosa Biotech is redefining biosensing through its AI-driven outcome-focused approach. Our patent-pending biosensing platform enables the accuracy and saleability to address previously intractable challenges in early disease diagnosis and industrial biotechnology.

Our technology combines state-of-the-art peptide design with machine learning methods, building and expanding upon the pioneering work of Professor Dek Woolfson and his team within University of Bristol's Centre for Synthetic Biology – see Woolfson *et al.*, Science 2014, 346, 485-488.

Rosa Biotech was incorporated in March 2019. The company is backed by a team of experienced, high-profile business angels. These include the founders of Ziylo, the biosensing company recently acquired by Novo Nordisk for up to $800 million, and Cramer, the systems technology company acquired by Amdocs for $450M.

We are based at the Unit DX biosciences hub in the heart of Bristol. Conveniently located near Bristol Temple Meads station, the hub is home to over 20 science-driven companies and provides a melting pot of academic researchers, startup and spinout companies, investors and support services.

Job description

The role will involve working closely with both our scientific research and software engineering teams. You will be responsible for providing advice and assistance to both groups as well as the tasks identified below.

Drawing upon input from our scientific research team, you will build and develop statistical/ machine-learning (ML) prediction and classification algorithms for Rosa Biotech's biosensing technology. These will be applied directly in early commercial applications and long-term development opportunities. In addition, we see broader programming and data opportunities for instance in programming its experimental robotics platforms. To these ends, we are looking for candidates with a postgraduate research background in statistics, ML, bioinformatics, data science, computer science, computational chemistry or biochemistry.

Expertise in statistics and ML for prediction, classification and sensing in an industrial setting would be a distinct advantage for this post, and applicants from these areas are particularly encouraged to apply. However, we are keen to receive applications from ambitious and energetic individuals across relevant fields with an interest in putting their skills to use in the commercial development of peptide design and biosensing.

The successful applicant will join a vibrant research team that combines expertise in bioinformatics and computational protein design, peptide and protein chemistry, biophysics and structural biology, and cell biology.

Roles and responsibilities

Research responsibilities

- Work closely with Rosa Biotech's chemists to develop the machine-learning components of Rosa Biotech's biosensing platform.
- Execute a research plan, drawing on input from the rest of the team.
- Write reports and collate supporting information, presenting work at company meetings, and potentially more widely.
- Work with the experimentalists to help document and report all experimental work in a timely fashion.
- Support company scale-up through support of automation platforms, data management and cloud computing.
- Build strong, positive working relationships with team members.

Person specifications

Relevant skills & experience

Essential

- Broad knowledge of machine learning and statistics including classification, clinical risk prediction models, unsupervised learning, and experimental design.
- Demonstrable skills and experience with Python and/or related programming languages and applications within these, e.g. Pandas, Scikit-learn, R.
- Demonstrable skills and experience with programming environments, tools and practices such as version control, containers, unit testing, continuous integration, notebooks.
- Ability to execute a research work plan; drawing on input/advice and feedback from the team leader and wider team.
- Ability to analyse, interpret and optimise experimental data, and draw conclusions.
- Ability to work independently with good problem-solving skills.
- Ability to take accurate and reliable records of work carried out.

Desirable

- Experience of programming for automation platforms, data management and cloud computing.
- Experience with analysis of data from high-throughput assays and functional assays of peptides/proteins.
- Experience of working in a multidisciplinary team in an early stage company.

Relevant qualifications

Essential

- A good honours degree (or equivalent) with subject knowledge and research experience in the relevant area.
- A postgraduate research background in computer science, statistics, data science, bioinformatics, or computational chemistry or biochemistry.

Desirable

- A first degree in maths, statistics or computer science or their application to a relevant field.
- A PhD in maths, statistics or computer science involving experience of modern peptide/protein chemistry/biochemistry and biophysics/structural biology.

Eligibility and expectations

In order to qualify for this position, you will need to be authorised to live and work in the UK. The majority of work will take place at Unit DX, Albert Road, Bristol, BS2 0XJ and the Synthetic Chemistry Building of the School of Chemistry, University of Bristol, Cantock's Close, Bristol BS8 1TS. The work may also involve short visits to other organisations in the UK and overseas, with the potential for occasional overnight stays.

At Rosa Biotech we value diversity. We are an equal opportunities employer and welcome employees who meet the requirements of the job, regardless of gender, ethnic origin, disability, age, religion or sexual orientation. You must have respect for others and a commitment and enthusiasm for high standards and continuous improvement.

Important information regarding your application:

By making this application you are confirming your consent for Rosa Biotech to hold details of your application and associated personal information strictly for recruitment purposes. Rosa Biotech will keep all recruitment documentation for 12 months following the job position being filled. The successful candidates' recruitment documentation will be kept in accordance with Rosa Biotech's Internal Personal Data Policy.

If you wish for your information to be removed from our records before that date, please contact hr@rosabio.tech stating "Personal information removal request" in the title of your email, or by writing to us at Rosa Biotech Limited, Unit DX, Albert Road, Bristol, BS2 0XJ.

How to apply

To apply for this role, please send your CV with a cover letter to: hr@rosabio.tech including "Job application – Developer, ML and data" in the subject line.

The deadline for application is **5pm UK time, Friday 16th August 2019**.